

Weather Versus Climate

Lots of Confusion

⚡ Potential Energy

Record Tornado Season Caused by Climate Change?

Unfortunately, no one knows.

KEVIN BULLIS 05/25/2011

1 COMMENT

America Crushed by the Snow and Ice of Global Warming

FIRE IT UP 19 207 COMMENTS

Recommend 51

Email



Selected Significant Climate Anomalies and Events March 2015

GLOBAL AVERAGE TEMPERATURE
March 2015 average global land and ocean temperature was the warmest March since records began in 1880.

ARCTIC SEA ICE EXTENT
March 2015 saw ice extent melt 7.3 percent below the 1981-2010 average—the smallest March sea ice extent since satellite records began in 1979.

SCANDINAVIA
Warm conditions were present across much of the region, with departures from average of +0.5 °C above average. Finland had its third warmest March since national records began in 1900.

AFRICA
Much of Africa experienced much warmer than average temperatures during March, with the exception of northeastern Africa.

AUSTRALIA
Australia as a whole had its eighth warmest March since national records began in 1910. However, Queensland had its warmest March on record. Northern Territory had a top 10 warm March.

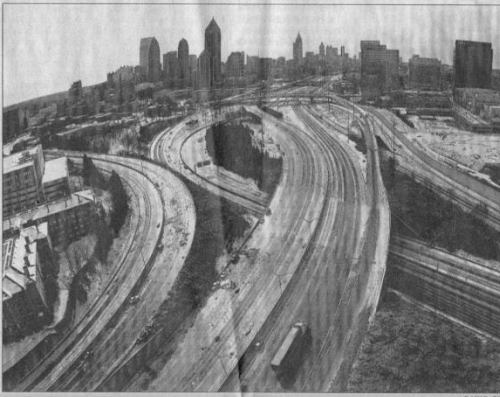
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Freezing out the bigger picture: Arctic blasts tied to climate change

WEATHER | A lot of people are asking these days: If the world is really warming up, how come it is so darned cold?

By JUSTIN GILLIS
The New York Times

At the exact moment President Obama was declaring last month that “climate change is a fact,” thousands of drivers in Atlanta were trapped in a grueling winter ordeal, trying to get home on roads that had turned into ribbons of ice. As the president addressed Congress and the nation in his State of the Union speech, it was snowing intermittently outside the Capitol. The temperature would bottom out later that night at 13 degrees Fahrenheit in Washington, 14 in New York, 1 in Chicago, minus 6 in Minneapolis—and those readings were toasty compared with some of the lows earlier in January. Obama’s declaration provoked head-shaking from congressional climate deniers and unleashed a stream of mockery on Twitter. “As soon as the president’s climate



SCIENCE CONNECTIONS EXTREME WEATHER & CLIMATE CHANGE

→ Strongest Scientific Evidence Shows Human-Caused Climate Change Is Increasing Heat Waves and Coastal Flooding



TORNADOES HURRICANES

Limited Evidence



SEVERE DROUGHTS

Strong Evidence



EXTREME PRECIPITATION EVENTS



COASTAL FLOODING



HEAT WAVES

Strongest Evidence

©2012 Union of Concerned Scientists www.ucsusa.org/climateweather
Source: Intergovernmental Panel on Climate Change SREX Report (2012)

Weather Versus Climate

- **Weather** – Conditions in the atmosphere at a particular time and place (outside your window). Weather is what you get.
- **Climate** – Long-term average of weather. Climate is what you expect.

Watch Video on Weather versus Climate

<https://youtu.be/VHgyOa70Q7Y>

Weather is made up of extremes

“Normal” weather does not exist

- Normals are really just means of the extremes
- Weather changes from year to year



And Climate is always changing

- Natural Causes
 - Volcanoes
 - Solar activity
 - Changes in ocean patterns
- Man made Causes?
 - Greenhouse gases (CO₂, Methane)

Purpose of this presentation is not to support or dispute human's influence on climate.

Conclusion

- Weather is what you get. Climate is what you expect.
- Weather changes day to day, month to month, year to year.
- Climate also changes over time (natural, man made).
- Just remember...Weather is not climate, and climate is not weather and we forecast the weather.